Reply to Office Action of January 5, 2009

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Original): A lubricant for powder metallurgy comprising a polyhydroxycarboxylic acid amide of the following formula (1):

$$R^{1}CON \stackrel{R^{2}}{\underset{R^{3}}{ }}$$
 (1)

(wherein R¹ represents an alkyl group having from 2 to 10 carbon atoms and substituted with plural hydroxyl groups; R² represents a hydrocarbon group having from 8 to 30 carbon atoms; and R³ represents a hydrogen atom, or a hydrocarbon group having from 1 to 30 carbon atoms).

Claim 2 (Original): A lubricant for powder metallurgy comprising a polyhydroxycarboxylic acid amide of the following formula (1):

$$R^{1}CON \stackrel{R^{2}}{\underset{R^{3}}{\overline{\qquad}}}$$
 (1)

(wherein R^1 represents an alkyl group substituted with plural hydroxyl groups, provided that the number of the carbon atoms constituting the alkyl group is an integer selected from a range of from n to $5 \times n$, in which n indicates the number of the substituted hydroxyl groups; R^2 represents a hydrocarbon group having from 8 to 30 carbon atoms; and R^3 represents a hydrogen atom, or a hydrocarbon group having from 1 to 30 carbon atoms).

Claim 3 (Previously Presented): The lubricant for powder metallurgy as claimed in claim 1, wherein the polyhydroxycarboxylic acid amide (1) is an aldonic acid amide.

Claim 4 (Previously Presented): The lubricant for powder metallurgy as claimed in claim 1, wherein R¹ has 5 carbons atoms.

Claim 5 (Previously Presented): The lubricant for powder metallurgy as claimed in claim 1, wherein R³ is a hydrogen atom.

Claim 6 (Previously Presented): The lubricant for powder metallurgy as claimed in claim 1, which has a mean particle size of from 1 to 300 µm.

Claim 7 (Previously Presented): The lubricant for powder metallurgy as claimed in claim 1, which further contains an auxiliary lubricant and in which the auxiliary lubricant is at least one selected from a metal soap, an alkylenebis-fatty acid amide and a fatty acid amide of the following formula (2):

$$R^4CON \stackrel{R^5}{\longleftarrow} (2)$$

(wherein R⁴ represents a hydrocarbon group having from 7 to 29 carbon atoms; R⁵ represents a hydrogen atom, or a hydrocarbon group having from 1 to 30 carbon atoms).

Claim 8 (Original): The lubricant for powder metallurgy as claimed in claim 7, wherein the fatty acid amide (2) is (N-octadecenyl)hexadecanoic acid amide or (N-octadecyl)docosenoic acid amide.

Claim 9 (Original): The lubricant for powder metallurgy as claimed in claim 7, wherein the ratio by mass of the polyhydroxycarboxylic acid amide (1) to the auxiliary lubricant (former/latter) is from 30/70 to less than 100/0.

Claim 10 (Original): The lubricant for powder metallurgy as claimed in claim 7, which further contains a fatty acid.

Claim 11 (Original): The lubricant for powder metallurgy as claimed in claim 10, wherein the fatty acid is a saturated aliphatic monocarboxylic acid having from 16 to 22 carbon atoms.

Claim 12 (Currently Amended): The lubricant for powder metallurgy as claimed in claim [[7]] 10, wherein the ratio by mass of the total of the polyhydroxycarboxylic acid amide (1) and the fatty acid to the auxiliary lubricant (former/latter) is from 30/70 to less than 100/0; and

the ratio by mass of the polyhydroxycarboxylic acid amide (1) to the fatty acid (former/latter) is from 20/80 to less than 100/0.

Claim 13 (Previously Presented): A mixed powder for powder metallurgy, prepared by mixing a lubricant for powder metallurgy of claim 1, and a metal powder.

Claim 14 (Original): A method for producing a sintered body, comprising shaping a mixed powder for powder metallurgy of claim 13 through compression followed by sintering it.

Claim 15 (New): The lubricant for powder metallurgy as claimed in claim 2, wherein R^1 has 5 carbons atoms.

Claim 16 (New): The lubricant for powder metallurgy as claimed in claim 2, wherein R³ is a hydrogen atom.

Claim 17 (New): The lubricant for powder metallurgy as claimed in claim 2, which has a mean particle size of from 1 to 300 μ m.

Claim 18 (New): The lubricant for powder metallurgy as claimed in claim 2, which further contains an auxiliary lubricant and in which the auxiliary lubricant is at least one selected from a metal soap, an alkylenebis-fatty acid amide and a fatty acid amide of the following formula (2):

$$R^4CON \stackrel{R^5}{\longleftarrow} H$$
 (2)

(wherein R⁴ represents a hydrocarbon group having from 7 to 29 carbon atoms; R⁵ represents a hydrogen atom, or a hydrocarbon group having from 1 to 30 carbon atoms).

Claim 19 (New): The lubricant for powder metallurgy as claimed in claim 18, wherein the fatty acid amide (2) is (N-octadecenyl)hexadecanoic acid amide or (N-octadecyl)docosenoic acid amide.

Claim 20 (New): The lubricant for powder metallurgy as claimed in claim 18, wherein the ratio by mass of the polyhydroxycarboxylic acid amide (1) to the auxiliary lubricant (former/latter) is from 30/70 to less than 100/0.

Claim 21 (New): The lubricant for powder metallurgy as claimed in claim 18, which further contains a fatty acid.

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Claim 22 (New): The lubricant for powder metallurgy as claimed in claim 21, wherein the fatty acid is a saturated aliphatic monocarboxylic acid having from 16 to 22 carbon atoms.

Claim 23 (New): The lubricant for powder metallurgy as claimed in claim 21, wherein the ratio by mass of the total of the polyhydroxycarboxylic acid amide (1) and the fatty acid to the auxiliary lubricant (former/latter) is from 30/70 to less than 100/0; and the ratio by mass of the polyhydroxycarboxylic acid amide (1) to the fatty acid (former/latter) is from 20/80 to less than 100/0.

Claim 24 (New): A mixed powder for powder metallurgy, prepared by mixing a lubricant for powder metallurgy of claim 15, and a metal powder.

Claim 25 (New): A method for producing a sintered body, comprising shaping a mixed powder for powder metallurgy of claim 24 through compression followed by sintering it.